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LCDR David P. Polatty IV, USN (RC)

Paper Advisor (if Any): **COL Richard Findlay, USMC**

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14. ABSTRACT

In current military actions around the globe, Joint Force Maritime Component Commanders (JFMCC) are being utilized to command and control (C2) joint maritime operations even though JFMCC concept and doctrine are still in the developmental stage. The lack of established doctrine, especially for integration into joint air operations, has resulted in a recognizable deficiency in commonality between the various Navy numbered fleet JFMCCs and has created one of the most controversial topics being discussed among senior military leadership. This paper argues that JFMCC doctrine and processes need to be systematically integrated into existing Joint Force Air Component Commander (JFACC) doctrine and processes to ensure effective C2 of joint air operations. This study proposes a short-term solution to bridge the gap between increasingly complex joint air operations and the lack of a current JFMCC doctrine that effectively integrates with well-established JFACC procedures. The intent is to stimulate further doctrinal development and ultimately ensure unity of effort in accomplishing the Joint Force Commander's (JFC) desired effects and operational and strategic objectives. This paper will examine the history and current state of JFMCC concept, doctrine, and organizational development, and will describe the roles and responsibilities of the JFMCC and JFACC. It will also investigate JFACC concept and battle rhythm, as well as analyze Air Operations Center (AOC) C2 processes. This analysis will result in the creation of a proposed JFMCC-JFACC air operations integration process cycle.

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JFMCC Command and Control of Air Operations- Effective Integration with JFACC

By

David P. Polatty IV

Lieutenant Commander, USN (RC)

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: _____

13 February 2006

Colonel Richard Findlay, USMC
Faculty Paper Advisor

Abstract

In current military actions around the globe, Joint Force Maritime Component Commanders (JFMCC) are being utilized to command and control (C2) joint maritime operations even though JFMCC concept and doctrine are still in the developmental stage. The lack of established doctrine, especially for integration into joint air operations, has resulted in a recognizable deficiency in commonality between the various Navy numbered fleet JFMCCs and has created one of the most controversial topics being discussed among senior military leadership.

This paper argues that JFMCC doctrine and processes need to be systematically integrated into existing Joint Force Air Component Commander (JFACC) doctrine and processes to ensure effective C2 of joint air operations. This study proposes a short-term solution to bridge the gap between increasingly complex joint air operations and the lack of a current JFMCC doctrine that effectively integrates with well-established JFACC procedures. The intent is to stimulate further doctrinal development and ultimately ensure unity of effort in accomplishing the Joint Force Commander's (JFC) desired effects and operational and strategic objectives.

This paper will examine the history and current state of JFMCC concept, doctrine, and organizational development, and will describe the roles and responsibilities of the JFMCC and JFACC. It will also investigate JFACC concept and battle rhythm, as well as analyze Air Operations Center (AOC) C2 processes. This analysis will result in the creation of a proposed JFMCC-JFACC air operations integration process cycle.

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> No matter where we fight in the future, no matter what the circumstances, we will fight as a joint team. We will have fingers on the team that are individual Services, but when it comes to the fight we want the closed, clenched fist of American military power. The days of single Service warfare are gone forever.
>
> ADM David E. Jeremiah, USN, *Joint Pub 1*

Introduction

This paper argues that Joint Force Maritime Component Commander (JFMCC) doctrine and processes need to be systematically integrated into existing Joint Force Air Component Commander (JFACC) doctrine and processes to ensure effective command and control (C2) of joint air operations. This study proposes a short-term solution to bridge the gap between increasingly complex joint air operations and the lack of a current JFMCC doctrine that effectively integrates with well-established JFACC procedures. The intent is to stimulate further doctrinal development and ultimately ensure unity of effort in accomplishing the Joint Force Commander's (JFC) desired effects and operational and strategic objectives.

Although JFMCC concepts and doctrine are still in the developmental stage, JFMCCs are utilized to command and control joint maritime operations in current military actions around the globe. The intent of a JFMCC is to ease the burden on the JFC and other functional component commanders by integrating and synchronizing maritime operations with other theater operations. Unfortunately, JFMCC integration has not relieved pressure on these organizations, and has additionally caused a great deal of confusion within the joint team. In many instances it has increased existing service parochialisms. Moreover, the lack of established JFMCC doctrine, especially for integration into joint air operations, has resulted in a recognizable deficiency in commonality between the various Navy numbered

fleet JFMCCs, creating one of the most controversial topics among senior military leadership.

This paper examines the history and current state of the JFMCC concept, doctrine, and organizational development, and describes the roles and responsibilities of the JFMCC and JFACC. It also investigates the JFACC concept and battle rhythm and analyzes Air Operations Center (AOC) C2 processes. This analysis will be utilized to create a systematic process for JFMCC to successfully integrate with JFACC and effectively coordinate joint air operations in support of joint fires and other critical functional component missions.

Background

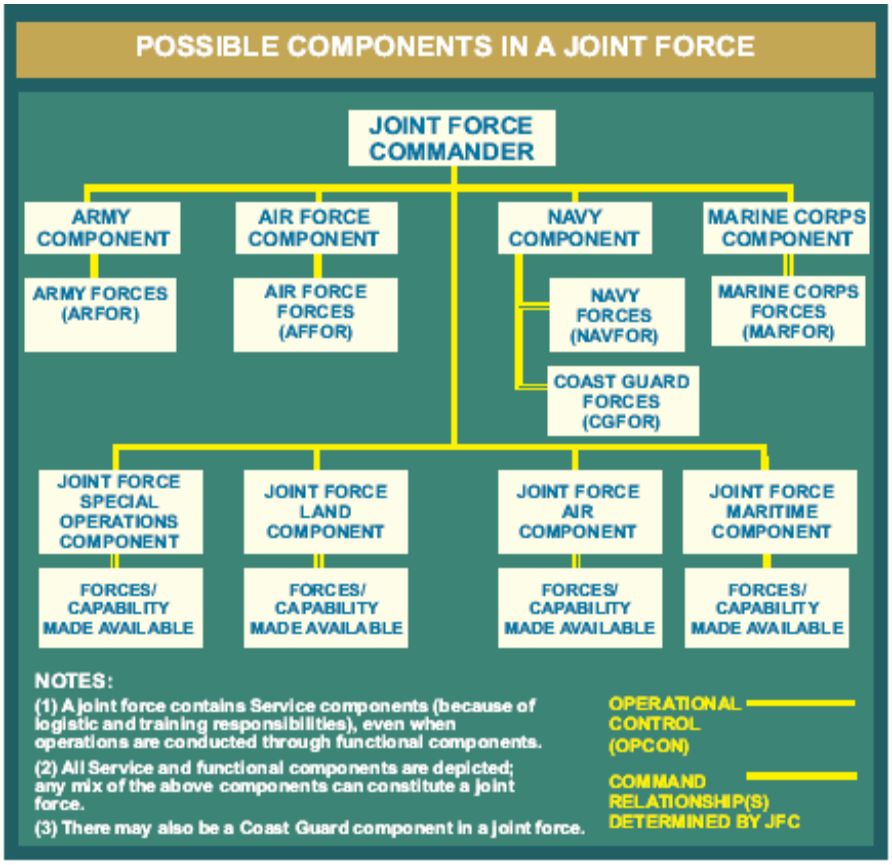
Since the tremendous success of joint maritime operations in the Pacific theater during the Second World War, the Navy has struggled with its ability to integrate and exercise C2 of joint forces at the operational level of war. For numerous reasons, the Navy's ability to conduct C2 of joint operations eroded significantly over the next forty years, primarily due to an institutional shift in focus to single-service sea-based operations and an emphasis on tactical level action in response to the threat of a powerful Soviet Navy.

The Goldwater-Nichols Department of Defense Reorganization Act (GNA) of 1986 instituted radical changes to existing military organizations and policies with the clear intent of forcing the individual services to work more effectively as a joint team. As a result, Combatant Commanders (CCDR), Joint Task Force (JTF) commanders, and subordinate unified commanders are authorized to establish functional component commands in order to conduct military operations. Joint doctrine sanctions JFCs to:

> Establish a functional component command to integrate planning; reduce their span of control; and/or significantly improve combat efficiency, information flow, unity of effort, weapon systems management, component interaction, or control over scheme of maneuver.[1]

Because of this, functional components can help reduce a potentially overwhelming and unmanageable C2 burden for the JFC and can increase the overall unity of effort in joint operations. A JFC can delegate specific responsibilities and authority to each functional component commander, designate forces and military capabilities that are assigned for tasking to each commander, and appoint operational control (OPCON) over these assigned forces. Of note, the functional component commander is normally a service component commander who is designated by the JFC because they possess the preponderance of applicable forces within the given theater, requisite C2 capabilities, and available staff and resources to support operations. Figure 1 shows the possible joint force components.

Figure 1: Possible Components in a Joint Force[2]



In Joint Publication (JP) 1, *Joint Warfare of the Armed Forces of the United States*, the overarching operational joint concept for JFCs states that they should "integrate and synchronize the actions of air, land, sea, space, and special operations forces to achieve strategic and operational objectives."[3]

Despite these changes, Operation DESERT STORM in 1990 vividly showcased the Navy's inability to effectively command and integrate with a joint force, especially joint air operations, and over the next decade the Navy failed to establish itself as much more than a force provider to the joint team. Meanwhile, the Air Force established a JFACC concept for C2 of joint air operations that became proven and mature, and the Army developed an effective Joint Force Land Component Commander (JFLCC) doctrine for C2 of joint land operations. The Navy continued to struggle until mid-2004 to establish any doctrine that could be utilized as a foundation for JFMCC development.

JFMCC Doctrine and Concept

NWDC TACMEMO 3-32-03, *JFMCC Planning and Execution*, was the first document that defined processes for planning and executing joint maritime operations, but it was created just as the JFMCC concept and official Joint Staff doctrine were in the initial stages of development. At the time it was published, it was the only document that provided an overview of JFMCC responsibilities, functions, and staff organization, and it even recommended a general and broad planning process. This document undoubtedly stimulated further JFMCC development and allowed the Navy to begin to utilize basic organizational structures and procedures in both real-world operations and exercises.

The TACMEMO only vaguely discusses horizontal integration with any of the functional components, stating that members from the JFMCC Operational Planning Team

(OPT) will "provide appropriate liaisons to the component planning boards and cells."[4] It notes that constant assessment and interaction with the other functional components are essential to planning success, but fails to define any specific requirements for these interactions. From an execution perspective, there is very little guidance on how JFMCC should integrate and synchronize maritime air operations with JFACC air operations. The TACMEMO identifies the necessity for a Maritime Task Plan (MTP) as a tool to assist with sequencing, synchronizing, and phasing maritime operations, but to date, the Navy has not selected a specific technology for the MTP.

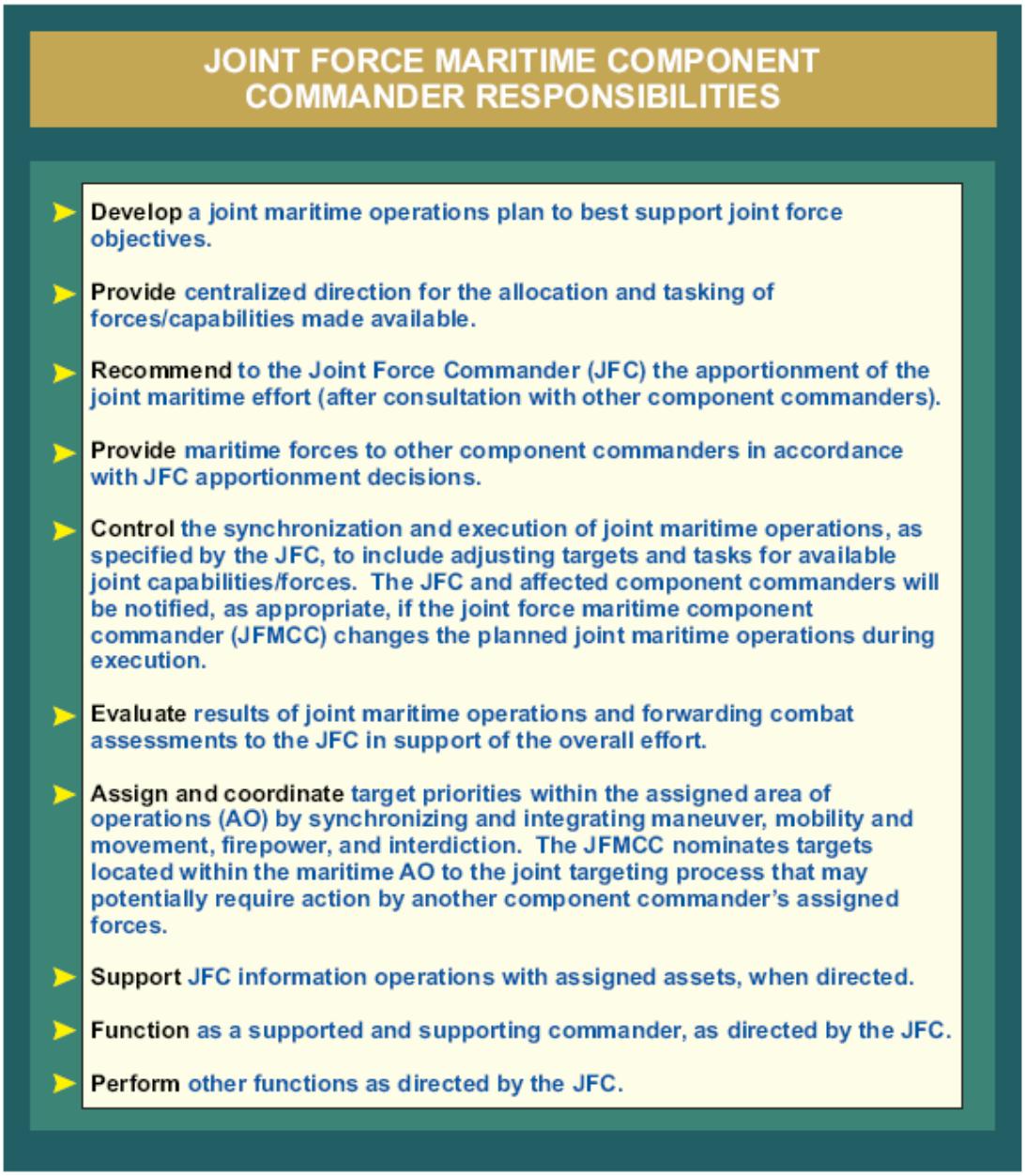
Over the past few years, U.S. Joint Forces Command (JFCOM) has begun to identify the necessity for the JFMCC and its responsibilities in a number of JPs. The JFMCC is primarily responsible:

> . . .to the establishing commander for making recommendations on the proper employment of assigned, attached, and/or made available for tasking maritime forces and assets; planning and coordinating maritime operations; or accomplishing such operational missions as may be assigned. . .given the authority necessary to accomplish missions and tasks assigned by the establishing commander.[5]

JP 3-32, *Command and Control for Joint Maritime Operations (2nd Draft)*, is still in draft form at this time, but it clearly establishes the JFMCC as the JFC's maritime warfighter that may be given control of navies, special forces, nonmilitary shipping, embarked army/ground forces, and air/air defense forces involved in operations within the maritime environment. JFMCCs are tasked to provide C2 over forces to establish command of the sea, maintain sea control, and project offensive or defensive operations from the sea in support of joint operations.[6] The JFC will assign the JFMCC an Area of Operations (AO) within the maritime environment, which is defined as "the oceans, seas, bays, estuaries, islands, coastal

areas and airspace above these, including the littorals."[7] JFMCC responsibilities are identified in Figure 2.

Figure 2: JFMCC Responsibilities[8]



Over the past year, the JFMCC Operational Advisory Group (OAG) and Commander Second Fleet (C2F), acting as the JFMCC Operational Agent (OA), have been developing a concept paper titled "Maritime Headquarters with Maritime Operations Centers: An Enabling

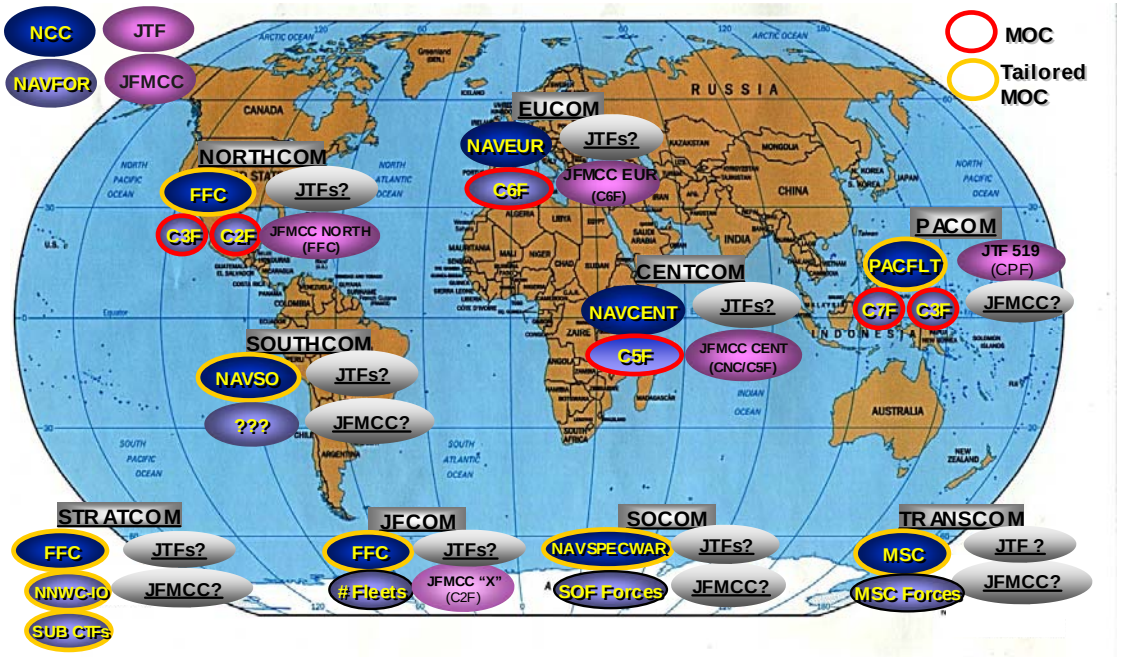
Concept for Supporting Naval and Joint Maritime Operations" (MHQ/MOC Enabling Concept). This paper is intended to accelerate the implementation of the authoritative doctrine contained in JP 3-32 and the guidance found in TACMEMO 3-32-03. While this document and other significant actions being taken by the OAG will undoubtedly help the Navy deal internally with manpower, training, education, systems, and organizational issues, by design it does not specifically deal with efforts to integrate doctrinally with the JFACC during joint air operations.

The MHQ/MOC Enabling Concept provides several exceptional recommendations to help hasten JFMCC doctrine and execution, and establishes the framework to provide an acceptable level of commonality between the numbered fleets.[9] The highlights of these recommendations are:

- The establishment, alignment, and growth of designated standing Maritime Headquarters (MHQ) capable of supporting complex naval and joint operations. MHQs will be designed to function as a Navy, naval, and joint headquarters and be able to conduct fleet management functions and operations.
- The creation of a Maritime Operations Center (MOC) within each MHQ composed of personnel, equipment, facilities, and procedures that will enable the JFMCC to conduct operational C2. MOCs will be structured to provide standardization, but will retain the flexibility necessary to allow command specific requirements to be met. MOCs will be designated as weapons systems in a similar manner to Air Force Falconer/Air Operations Centers (AOC).
- All of the numbered fleet MHQs will have a MOC and will typically act as JFMCCs for a JFC. All other MHQs will have a tailored MOC and specific capabilities that

satisfy their functional or geographic combatant commander requirements. Proposed MHQs and MOCs are delineated in Figure 3.

Figure 3: Proposed Maritime Headquarters/ Maritime Operations Centers[10]



- These MHQs will be globally networked through FORCEnet* functional concepts and utilized to maintain a Common Operational Picture (COP) of the maritime environment that facilitates global, regional, and local Maritime Domain Awareness (MDA).[11]

JFMCC Organization

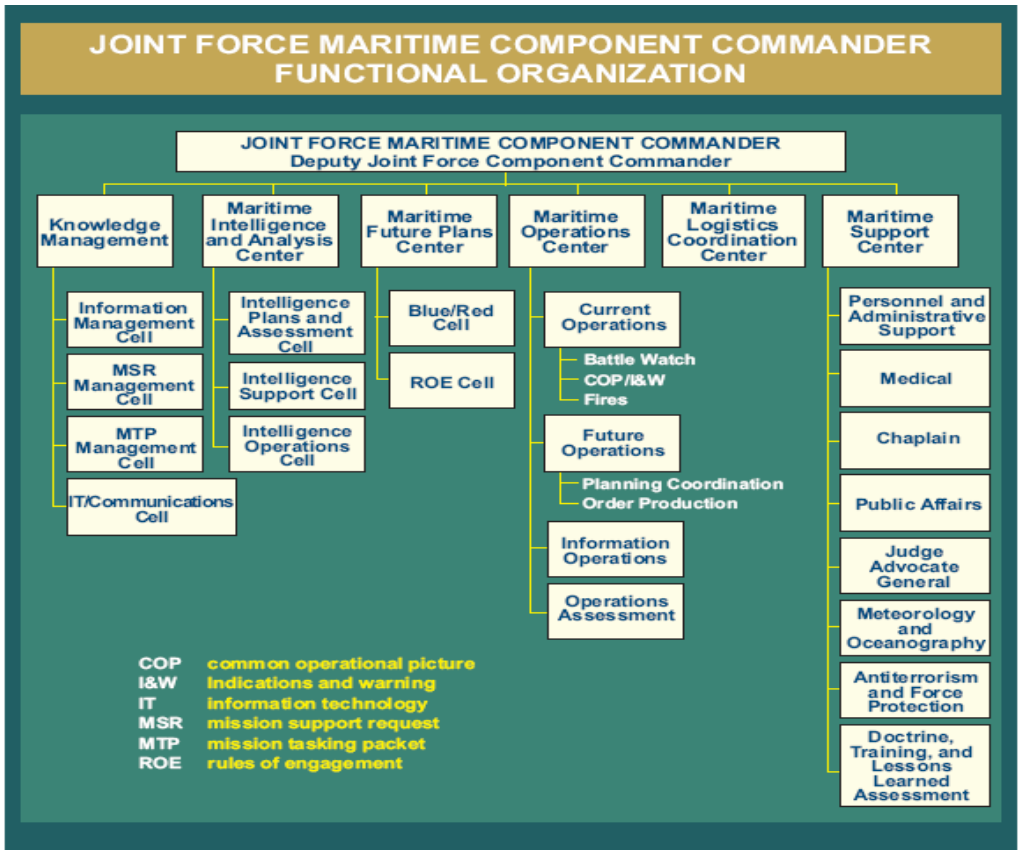
The JFMCC OAG is in the initial stages of developing a master Joint Manning Document (JMD) that is scalable to the type, duration, and theater-specific requirements of varying operations. At the same time, the numbered fleet staffs have been utilizing the functional organization found in TACMEMO 3-32-03 to develop their own JFMCC JMDs in

* FORCEnet: A Functional Concept for the 21st Century envisions the future concept for networked naval C2 of joint operations and supporting activities. The adaptive and distributed C2 systems and processes described in this document are forecasted for implementation in 2015 to 2020.

order to act as a JFMCC in real-world operations and exercises. One of the primary goals of the OAG Manpower and Organization working group is to coordinate with the numbered fleets to achieve an acceptable level of commonality between different JFMCC JMDs.[12] The OAG JMD is currently in draft format and requires vetting by the Manpower and Organization working group, but is already designed to be a scalable organization with a maximum of 650 billets.[13]

JP 3-32 gives very little guidance on the composition of a JFMCC staff organization other than a notional overview. TACMEMO 3-32-03 gives more detail on the different centers and cells, but primarily discusses functions and products, giving no real insight into JFMCC interaction with JFACC. The notional JFMCC functional organization from JP 3-32, which is identical to the one contained in TACMEMO 3-32-03, is shown in Figure 4 below.

Figure 4: JFMCC Functional Organization[14]



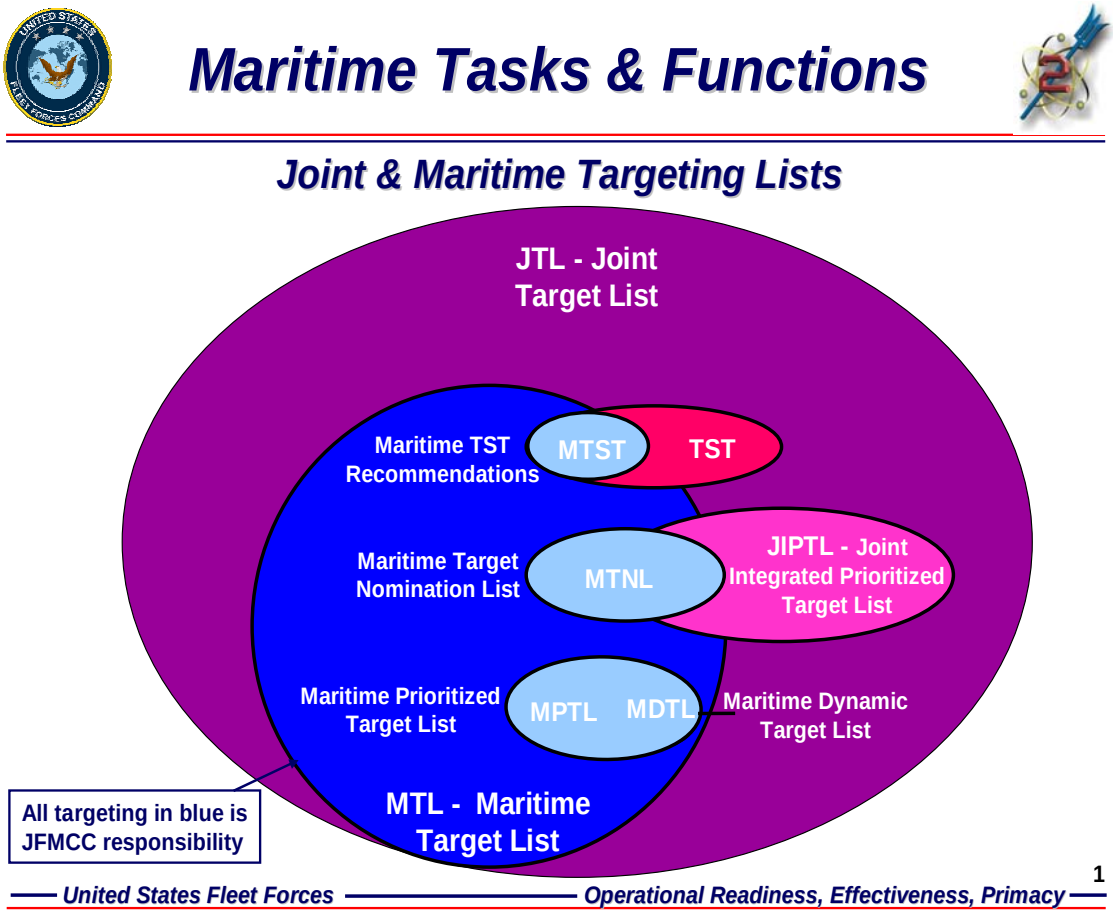
An examination of each organization's functions and processes contained in TACMEMO 3-32-03 reveals that there are five key teams directly involved with C2 planning and execution for air operations that may have interaction with JFACC centers or cells: the Maritime Future Plans Center (FPC); the Current Operations (COPS) Cell; the Future Operations (FUOPS) Cell; the Operations Assessment Cell (OAC); and the Maritime Intelligence and Analysis Center (MIAC). The FPC is tasked to conduct long range planning (> 96hrs) and is given very basic guidance that stipulates collaboration with other components for planning purposes. The FUOPS (~24-96 hrs) and COPS (< 24 hrs) cells are "responsible for operational level coordination, synchronization, and guidance of near term planning and execution," [15] but no specific processes are delineated for accomplishing these requirements with the other functional components. The OAC is responsible for continuous evaluation of operations to assess progress towards the accomplishment of JFMCC's operational objectives. The OAC consolidates information from other component commanders to provide the most accurate assessment.[16] The MIAC is tasked to provide collection management, maritime threat assessment, maritime target development, and battle damage assessment (BDA).[17]

Joint Fires and ISR through Air Operations

Air operations have the capability and means to help achieve JFC's desired effects and strategic and operational objectives. Joint fires and Identification, Surveillance, and Reconnaissance (ISR) are two critical joint functions that can be accomplished through careful planning and conduct of air operations. ISR activities continuously fuse together actions from all sensors and assets to provide the commander with the battlespace awareness and intelligence to successfully conduct current and future operations. Joint fires are

employed at the operational and tactical level against air, ground, and sea targets to help shape the battlespace and achieve desired effects.[18] In addition to executing fires against planned targets, JFMCC and other components will likely attack time-sensitive targets (TST). A TST is considered such a high priority that it requires an "immediate response because it poses (or will soon pose) a danger to friendly forces, or it is a highly lucrative, fleeting target of opportunity."[19] JFMCC doctrine has very little guidance on planning for the maritime targeting of joint fires, so C2F is in the process of developing maritime targeting list terminology to assist integration with joint targeting lists. These proposed recommendations are displayed in Figure 5 below.

Figure 5: Joint and Maritime Targeting Lists[20]

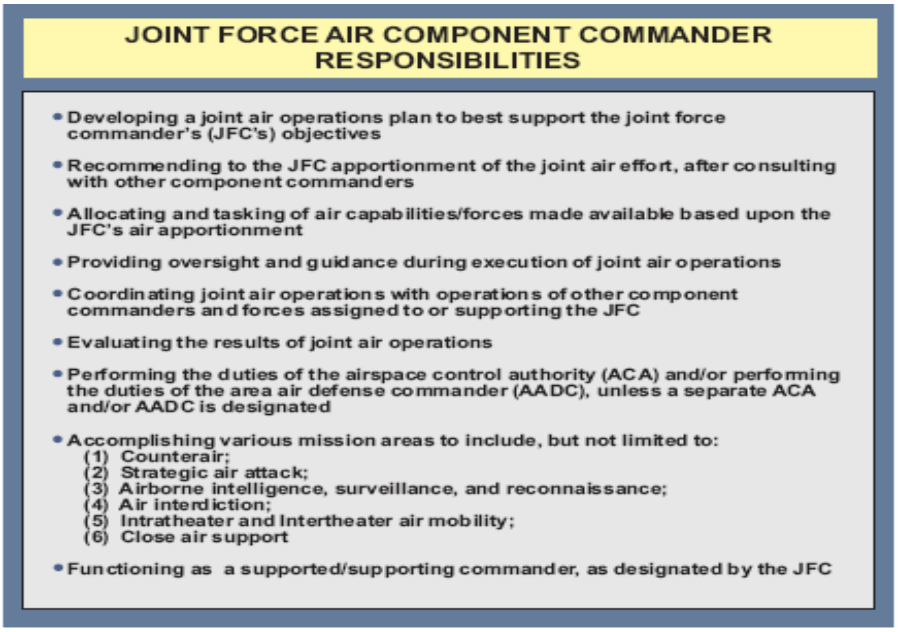


JFACC Doctrine and Concept

In order to develop a process that can effectively integrate and synchronize JFMCC and JFACC procedures, it is necessary to analyze JFACC doctrine, organization, and processes. Since Operation DESERT STORM, the Air Force has deliberately refined the JFACC concept by developing and exercising detailed doctrine and processes, creating a series of well-resourced AOCs to support regional combatant commander needs, and establishing robust and flexible manpower packages to staff the AOCs. Today's JFACCs are able to successfully orchestrate and execute multi-dimensional air operations in support of JFC desired effects and operational and strategic objectives, utilizing assets from all of the service components with aviation resources.

JP 3-30, *Command and Control for Joint Air Operations*, establishes comprehensive principles and doctrine for the JFACC, and details staff organization, responsibilities, planning, and execution processes for centralized C2 of air operations. JFACC responsibilities are delineated in Figure 6 below.

Figure 6: JFACC Responsibilities[21]



JP 3-30 states that in order to achieve unity of effort in air operations, the JFACC needs to synchronize and integrate the actions of attached, assigned, and supporting air forces. It further states that the JFACC must take advantage of the unique capabilities of different types of assets in order to develop an effective joint air operations plan that synchronizes and integrates with other functional component operational plans.[22]

The center of JFACC's operational C2 is located in the AOC. Known as the AN/USQ-163 Falconer, it is a highly complex, capable, and intricate weapons system that has the capacity to C2, integrate, and deconflict thousands of air sorties each day. The Air Force has five Falconer-equipped AOCs that are strategically located around the globe to support C2 of air operations. There are also tailored AOC variants that have unique functionalities such as training and experimentation, and functional AOCs that are capable of supporting global requirements.

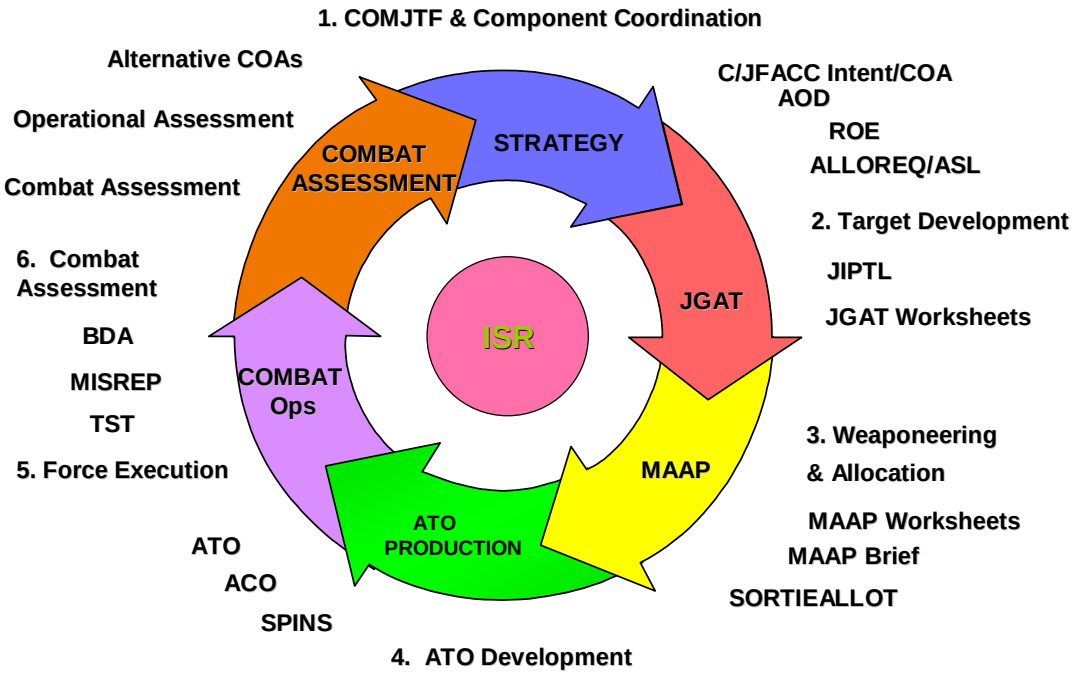
The joint air tasking cycle is the heart of AOC operations. It provides "a repetitive process for the planning, coordination, allocation, and tasking of joint air missions/sorties," [23] and is relatively flexible in allowing for changes in operational or tactical desired effects and objectives. A successfully executed air tasking cycle results in the production of an air tasking order (ATO) that promulgates joint air operations tasking in the following manner:

> Detailed planning normally begins 48 hours in advance of the execution period to allow integration of all component requirements. The net result of this planning effort is that there are usually three ATOs in various stages of progress at any time…A 72 hour ATO cycle, starting from JFC guidance and ending after a 24-hour execution period is fairly standard.[24]

The air tasking cycle drives the JFACC's battle rhythm and therefore has a significant impact on the battle rhythms of the JFMCC and the other functional components. The Falconer/AOC was specifically designed to allow for the efficient and standardized execution

of the air tasking cycle and enables JFACC to successfully conduct joint air operations. The air tasking cycle is broken down into six processes for execution by the AOC. An overview of these AOC processes that support the air tasking cycle is depicted in Figure 7.

Figure 7: Air Tasking Cycle/AOC Processes[25]

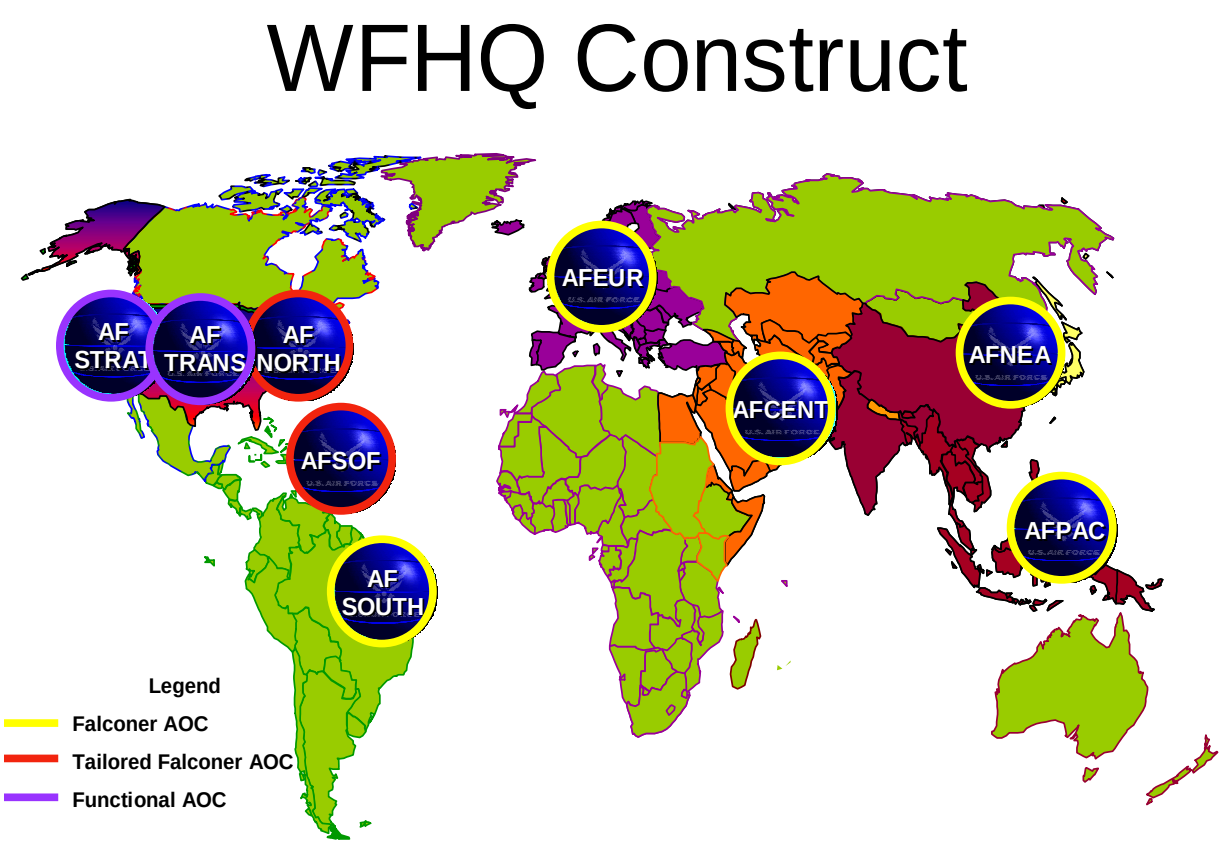


The Air Force is currently in the process of aligning and integrating the AOCs with its Warfighting Headquarters (WFHQs) around the globe. WFHQs are "organized and resourced to plan and deliver air and space power in support of U.S. and Unified Combatant Commander (UCC)[**] strategies at a core capability level on a daily basis."[26] With minimal joint augmentation, the WFHQs are designed to function as a JTF headquarters in addition to

[**] CCDR is the new abbreviation for Combatant Commander in joint doctrine.

their primary capability to serve as an AOC. The proposed WFHQ construct and different types of AOCs associated with each WFHQ are depicted in Figure 8 below.

Figure 8: Proposed Air Force WFHQ Construct[27]

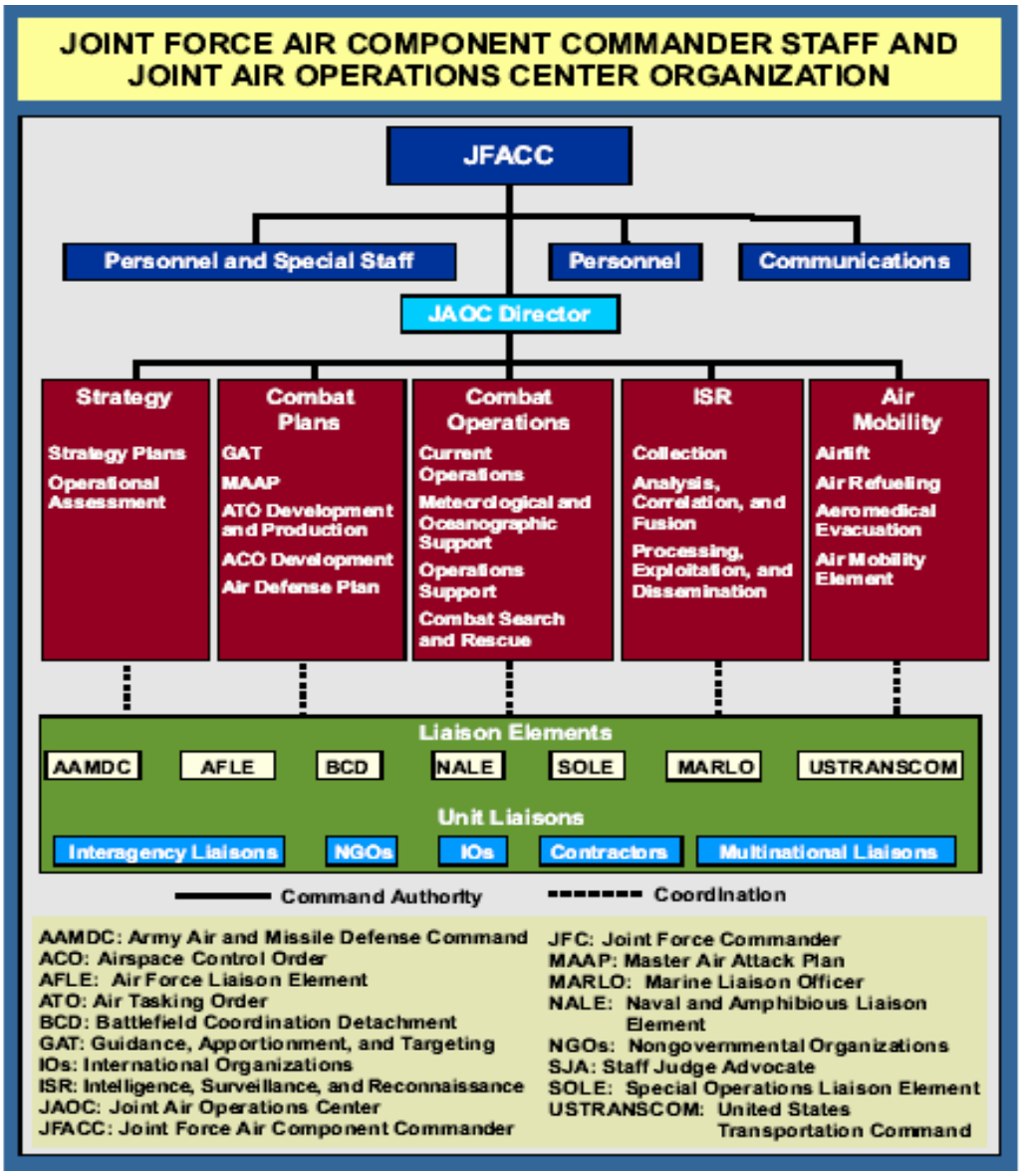


JFACC Organization

The JFACC has developed into a highly complex and responsive organization that can be modified to appropriately respond to the full spectrum of military operations. JP 3-30 states that in order to effectively execute C2, the "nucleus of the JFACC staff should be trained in joint air operations and be representative of the joint force,"[28] and specific manning requirements will be determined based upon the nature of the operation and personnel availability. Joint Air Operations Centers (JAOC) can be staffed in a multitude of sizes, but manpower packages normally have a minimum of 250 personnel for small scale operations,

and can have more than 1000 personnel to comprise the staff for the largest "theater response package."[29] The number of projected sorties plays a critical role in dictating the number of personnel that will be required to man JAOC divisions and cells. The notional JFACC staff and Joint Air Operations Center (JAOC) organization are depicted in Figure 9 below.

Figure 9: JFACC Staff and JAOC Organization[30]



An examination of each JFACC organization's functions and processes in JP 3-30, when combined with the previous analysis of JFMCC organizational processes, confirms that

there are five critical JFACC teams that may interact with JFMCC teams during the joint air tasking cycle to conduct C2 planning and execution: Strategy Plans; Joint Guidance, Apportionment, and Targeting Team (JGAT); Master Air Attack Plan (MAAP) team; Current Operations; and the Operational Assessment team. These five teams are directly responsible for successfully performing the six vital AOC processes: JTF and Component Coordination; Target Development; Weaponeering and Allocation; ATO Development; Force Execution; and Combat Assessment. The successful execution of these sequential processes fully supports joint air operations, and enables the joint team to accomplish both ISR and joint fires requirements in support of JFC's desired effects and operational and strategic objectives.

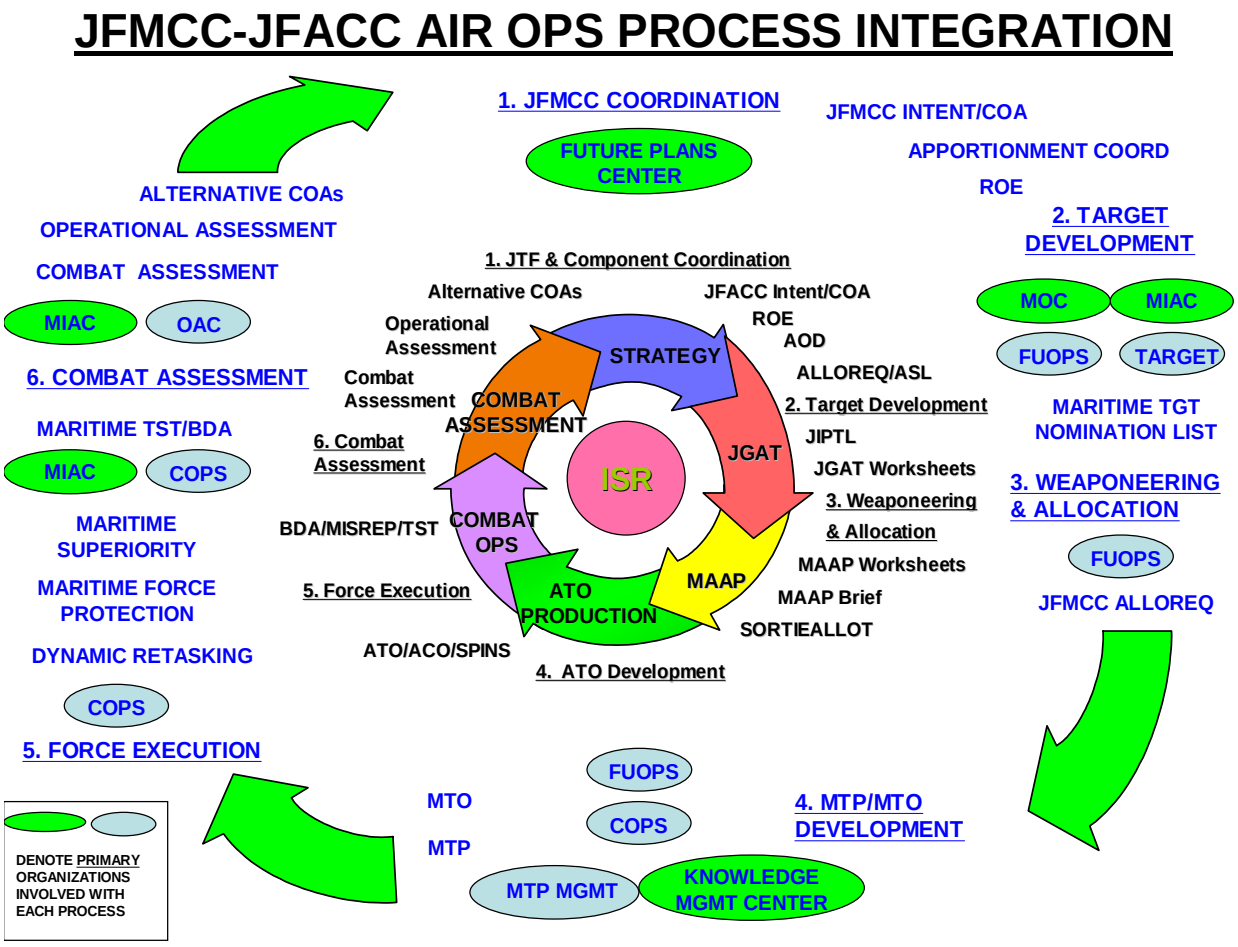
JFMCC and JFACC Air Operations Process Integration

After examining the basic concepts, doctrines, and organizations within JFMCC and JFACC, it is clear that there are a number of overlapping and shared responsibilities for planning and executing C2 of joint air operations. Since the JFACC has successfully demonstrated the effectiveness of its ability to C2 joint air operations, the air tasking cycle processes diagram from Figure 7 above will be used as a foundation to create a new systematic procedure for integrating JFMCC and JFACC air operations. This new process is intended to enhance interoperability, synchronization, and unity of effort for air operations under the JFC.

The proposed JFMCC and JFACC air operations process integration cycle is depicted in Figure 10 on the following page. Analysis of each integration recommendation and the associated interactions between organizations and teams will follow for all six processes. These recommendations utilize both established JFMCC doctrine from TACMEMO 3-32-03

and JFACC doctrine from JP 3-32, as well as potential innovative ideas that are intended to improve overall synchronization and sequencing of planning and execution processes.

Figure 10: Proposed JFMCC and JFACC Air Operations Process Integration



JFMCC Coordination

During the coordination phase, the JFC will consult with component commanders to perform an assessment of operations and determine future actions. As a result of these interactions, JFC will provide guidance and intent, desired effects, and operational objectives to all functional components. The JFC will also provide specific assumed tasks to each functional component that will often require a high level of interoperability to accomplish.[31]

The JFMCC should coordinate directly with the JFC and JFACC during this period either in person or via Video Teleconference (VTC), because these interactions will help guide the development and production of JFMCC's intent and desired course of action (COA). JFMCC and JFACC intent and COAs should be closely aligned to ensure that they complement one another in accomplishing JFC's guidance and intent. The JFMCC FPC should closely align its planning efforts in parallel fashion with JFACC Strategy Plans to ensure coordination of Rules of Engagement (ROE) and air apportionment. JFACC will make the air apportionment recommendation to JFC, who will ultimately approve it during this phase.

During the course of operations, the JFC will establish and update a supported and supporting command relationship between functional components to facilitate unified actions in planning and executing operations.[32] These command relationships will also help guide air apportionment and allocation decisions. Depending on the phase of operations and specific AO, there can be multiple supported and supporting relationships, so the FPC and Strategy Plans will have to carefully interact to ensure that the proper apportionment recommendations are made that result in the most effective use of available air assets within all AOs.

Target Development

The efforts of JFC's Joint Targeting Coordination Board (JTCB) connect target development to tasking during this phase. The JFACC JGAT team collates and screens target nominations from all components to ensure they meet JFC guidance and are both current and relevant. The JGAT also prioritizes targets based on their ability to achieve JFC guidance and components' priorities, and takes into account the operational factors of time,

space, and force to achieve maximum results. The Joint Integrated Prioritized Target List (JIPTL) is produced by the JFACC as a result of these actions.[33]

The JFMCC FUOPS, working closely with several JFMCC MIAC cells (including the MIAC Targeting Team) should coordinate with the JGAT to ensure that maritime targets will be accurately reflected and prioritized on the JIPTL. To ensure this occurs, the FUOPS needs to provide timely target priorities to the JGAT. Proposed future fires doctrine from Figure 5 above identifies this particular target prioritization as the Maritime Target Nomination List (MTNL). In an effort to ensure that JFMCC interests are clearly articulated and represented, an appropriate number of JFMCC LNOs and embedded staff should be sent to the JFACC to actively participate in the JGAT process.

Weaponeering and Allocation

The JFACC Master Air Attack Plan (MAAP) team takes the JIPTL and allocates airpower by combining available capabilities within the JGAT recommendations. The resulting MAAP is "the plan of employment that forms the foundation of the ATO"[34] and provides the final air allocation decision for the next ATO to be produced. To facilitate development of this critical phase of the air tasking cycle, the JFACC requests submission of an allocation request (ALLOREQ) from each air capable component no later than the start of the MAAP process.

Accordingly, the FUOPS should provide a detailed JFMCC ALLOREQ to the MAAP team no later than the beginning of the Weaponeering and Allocation phase. The JFMCC ALLOREQ needs to report excess sorties that are not needed for maritime fleet defense and are available for tasking by the JFACC, as well as any emergent requests for maritime air support that have emerged since the JGAT. To facilitate integration and synchronization

during this critical stage, the FUOPS should provide an applicable number of LNOs and embedded staff to the MAAP team to assist in developing an effective MAAP. If proper coordination and prioritization occur during the JGAT and MAAP, the final MAAP product should reflect an overall joint air plan that best supports JFC's desired effects and operational and strategic objectives for the given period.

MTP/MTO Development

The JFACC ATO/Airspace Control Order (ACO) Production team is responsible for the production and distribution of the ATO, ACO, and Special Instructions (SPINS). These three documents provide appropriate levels of detail for operational and tactical direction, and offer guidance for safety of flight, airspace deconfliction, engagement procedures, and ROE.[35] Within this phase the MAAP is transformed into a promulgated and executable flight schedule for a set period of time, typically 24 hours.

Building from the comprehensive coordination in the previous phases, the JFMCC must make every effort to get all maritime air tasks into the ATO to ensure the safe, methodical, and most efficient use of airspace within a theater. As the JFACC generates the ATO, the MTP Management Cell and FUOPS should share the burden of ensuring that the MTP properly reflects all maritime air operations that are promulgated in the ATO. Although it is only briefly mentioned within joint doctrine, a Maritime Tasking Order (MTO) should be promulgated by JFMCC to provide subordinate commanders with specific tasks they are assigned in the MTP.[36] Further doctrinal development of the MTO is necessary, but at a minimum the air portion should be as similar as possible to the format within the ATO to provide joint interoperability. Effective coordination between the MTP Management cell and

the ATO/ACO Production team will be critical to ensure timely ATO production as well as MTO/MTP and ATO alignment.

Force Execution

The execution phase is the most demanding segment of the air tasking cycle as complex planned and emergent air operations are conducted within a 24-hour period. Current doctrine further complicates matters as it is not consistent in establishing guidance for C2 of joint air operations when there is a maritime AO. JFACC is tasked to direct "the execution of air capabilities/forces made available for joint air operations"[37] and is the primary organization designated for revising in-flight aircraft tasking. JP 3-32 states that JFMCC will typically exercise OPCON over assigned and attached forces, including air and air defense forces within the maritime environment.[38] Due to these differences in doctrinal responsibility, there is little agreement between services on how to best conduct joint airspace C2.

Consequently, this study recommends that the JFMCC retains operational C2 over maritime air assets to ensure the successful sequencing and synchronization of joint maritime operations, while the JFACC maintains operational C2 of air operations within all non-maritime AOs. There are three critical reasons why the JFMCC should retain C2 of maritime air assets: (1) the dynamic and unique challenges associated with operations in the maritime environment, (2) the demanding constraints imposed upon flight operations in the vicinity of naval surface forces, and (3) the necessity for JFMCC to maintain maritime superiority and maritime force protection.

During this phase, the JFMCC COPS should establish the highest possible level of coordination with the JFACC Current Operations team. The COPS should provide an

appropriate number of LNOs and embedded staff to Current Operations in an effort to facilitate the seamless exchange of information flow and offer the requisite expertise in maritime operations to the JFACC. The COPS, working closely with MIAC cells, should provide Current Operations with maritime TST (MTST) requirements as well as maritime BDA results. Since JFACC conducts C2 for all non-maritime AOs (and will most likely have enhanced awareness of overall flight operations within a theater comprised of multiple AOs), it is recommended that the JFACC Current Operations retains final approval authority for redirecting joint air assets to support all TST requests. Effective coordination during execution will enable both COPS and Current Operations to quickly support emerging requirements such as TST within all AOs.

Combat Assessment

Combat assessments will occur during all phases of air operations, but are depicted as the final piece in the air tasking cycle to signal the beginning of the next day's ATO planning sequence. Both the JFMCC and JFACC should constantly assess and reassess operations to ensure that future ATOs and MTPs/MTOs are updated to achieve the JFC's guidance and intent. The JFMCC OAC and MIAC cells should integrate and coordinate their assessment efforts with the JFACC Operational Assessment team to facilitate a streamlined process for gathering and analyzing information on the operational and tactical results of air sorties. The combined assessment efforts should be provided to the JFC on a regular basis to ensure continuity of the planning cycle. Alternative JFMCC COAs should also be developed based on the results of previous and ongoing operations. As high priority targets are destroyed or degraded, lower priority and emergent targets will replace them within the cycle.

Counterargument

Some may argue that a short-term solution is not the answer to proper integration of JFMCC and JFACC air operations. They will contend that development of JFMCC doctrine that marries up with existing JFACC processes is a waste of time and all efforts should be made towards developing long-term joint doctrine for air operations that completely reengineers current JFACC procedures. There are also personnel within the Navy who will vehemently dispute aligning maritime air operations with JFACC air operations because of the inherent differences between the services, and they will point out the fact that the Navy and Marine Corps are already capable of effectively conducting their own joint air operations.

However, these arguments discount current reality and the pressure of time. Around the globe, joint air operations are currently being conducted continuously, and they are being planned and executed with a great deal of friction between components. Joint operations in support of the war against radical terrorists, coupled with the challenging budget and manpower environment, demand that our current forces operate together in the most cohesive and effective manner now. The implementation of a short-term solution can have an immediate impact on unity of effort within current operations and can also help stimulate long-term doctrinal development by providing valuable lessons learned from its implementation and execution.

Recommendations

1. The JFMCC-JFACC Air Operations Integration Process and analysis developed in this paper should be passed to the JFMCC OAG Doctrine working group for further review. Subsequently, it should be tested and validated by future war games and

exercises. Through these games and exercises, an effective short-term solution should be promulgated by the OAG to the numbered fleet JFMCCs.

2. The JFMCC OAG Doctrine working group should continue to develop doctrine and processes for long-term integration solutions by working closely with the Air Force as JFACC doctrine evolves with the proposed merger of the WFHQs and AOCs.
3. The Navy needs to accelerate the development of education and training programs for JFMCC as detailed in Appendix B. A major focus of these programs should be cross-service education and training with the Air Force to ensure that JFACC personnel are cognizant of JFMCC doctrine and air operation integration processes. The Navy needs to continue sending current and future JFMCC personnel to JFACC education and training programs identified in Appendix C.
4. The Navy should continue to pursue the recommendations from the C2F "MHQ/MOC Enabling Concept" to speed up JFMCC development. The similarities between WFHQ/AOC and MHQ/MOC concepts will have an exceptionally positive effect on increasing joint integration between the Navy and Air Force.

Conclusion

The global maritime strategic environment dictates the necessity for JFCs to have a maritime warfighter in the JFMCC, as seventy percent of the Earth's surface is covered by water and two-thirds of the world's population lives within one hundred nautical miles of the coast.[39] In current and future military actions, maritime operations will be a critical component in warfighting success. The JFACC controls air assets that can fly over virtually every corner of the earth's surface, and modern air power has the capacity and lethality to provide both operational and strategic effects. Because of the vast nature of the maritime and

air environments and the certainty that maritime and air forces will work together under a JFC, JFMCC and JFACC integration must succeed. To ensure this happens, JFMCC air operations doctrine and processes need to be closely aligned and synchronized with existing JFACC doctrine and processes.

At the operational level of war, with all of its complexities in planning and execution, it is important that understandable, concise, and tested procedures exist to help reduce the fog and friction that are inherent in warfare. Because the cost of failure cannot be tolerated, it is imperative that the recommendations in this paper are further examined, tested, validated and developed so that JFMCC and JFACC integration is accelerated and clearly defined doctrine is published to educate and train current and future staffs.

Appendix A: Abbreviations

ALLOREQ	**Allocation Request**
AO	**Area of Operations**
AOD	**Air Operations Directive**
AOC	**Air Operations Center**
ATO	**Air Tasking Order**
BDA	**Battle Damage Assessment**
CCDR	**Combatant Commander**
C2	**Command and Control**
COA	**Course of Action**
COG	**Center of Gravity**
CONOPS	**Concept of Operations**
COP	**Common Operational Picture**
COPS	**Current Operations Cell**
FUOPS	**Future Operations Cell**
FPC	**Future Plans Center**
GWOT	**Global War on Terrorism**
HQ	**Headquarters**
ISR	**Intelligence, Surveillance, and Reconnaissance**
JAOC	**Joint Air Operations Center**
JAOP	**Joint Air Operations Plan**
JIPTL	**Joint Integrated Prioritized Target List**

JFACC	**Joint Force Air Component Commander**
JFC	**Joint Force Commander**
JFLCC	**Joint Force Land Component Commander**
JFMCC	**Joint Force Maritime Component Commander**
JGAT	**Joint Guidance, Apportionment, and Targeting**
JMD	**Joint Manning Document**
JMO	**Joint Maritime Operations**
JOA	**Joint Operations Area**
JP	**Joint Publication**
JPG	**Joint Planning Group**
JTCB	**Joint Targeting Coordination Board**
JTF	**Joint Task Force**
LNO	**Liaison Officer**
MDA	**Maritime Domain Awareness**
MDTL	**Maritime Dynamic Target List**
MHQ	**Maritime Headquarters**
MIAC	**Maritime Intelligence and Analysis Center**
MOC	**Maritime Operations Center**
MPTL	**Maritime Prioritized Target List**
MTL	**Maritime Target List**
MTNL	**Maritime Target Nomination List**
MTO	**Maritime Tasking Order**
MTP	**Maritime Task Plan**

MTST	**Maritime Time Sensitive Target**
NWP	**Naval Warfare Publication**
OA	**Operational Agent**
OAC	**Operations Assessment Cell**
OAG	**Operational Advisory Group**
OPCON	**Operational Control**
OPLAN	**Operational Plan**
OPORD	**Operational Order**
ROE	**Rules of Engagement**
TACON	**Tactical Control**
WFHQ	**Warfighting Headquarters**

Appendix B: JFMCC Education and Training

JFMCC Education and Training

There is currently only one fully developed JFMCC education program: the JFMCC Flag Officer Course at the NWC. The inaugural "Course 0" was held in August 2005 with the intent to prepare future JFMCCs as well as stimulate the advancement of concept, doctrine, and capabilities within the Navy. One and two-star officers from the Navy and Marine Corps were personally selected by the VCNO and Assistant Commandant of the Marine Corps to attend, and the 7-day course was facilitated primarily by three- and four-star officers with recent joint operational command experience.

The President, NWC's intention is to offer future Flag Officer courses that will include students from the Coast Guard, Army, and Air Force. NWC is also in the initial stages of developing an O5-O6 level JFMCC course that can be delivered to senior officers who will serve on JFMCC staffs.

There are currently no official plans for developing JFMCC training programs, although the JFMCC OAG has had some initial discussions on the necessity of programs that are similar in structure to the Air Force.

Appendix C: JFACC Education and Training

JFACC Education and Training

There are multiple JFACC education and training programs:[40]

1. JFACC Flag Course- A seven-day USAF course designed to prepare potential JFACCs for theater-level combat leadership responsibilities. The course is typically held once a year for 17 one- and two-star officers from all services.
2. Joint Aerospace Operations Senior Staff Course (JSSC) – A one week USAF course designed to prepare O-5/O-6s for assignment to JFACC staffs. It is normally offered four times a year and provides instruction in JAOC processes and the ATO planning cycle. Seats are available for all services.
3. Joint Aerospace Tasking Order Process Course (JATOPC) – A three week USAF course designed to prepare E-5 to O-5s for assignment to JFACC staffs. It is usually held four times a year and provides detailed instruction on JAOC processes and joint service doctrine. Seats are available for all services.
4. JFACC Augmentation Staff Course (JASC) – A one week course designed as a refresher from the JATOPC. Unlike the other courses, these are run by the Navy through TACTRAGRULANT/PAC.

The Air Force Doctrine Center has also created a superb tool for JFACC training, the *Air & Space Commander's Handbook for the JFACC*. This document provides quick and concise guidelines, concepts, and lessons learned for JFACC staffs, and is an invaluable addition to standard doctrine.[41]

Endnotes

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[35] Ibid, III-24.

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